Stream Restoration of Mill Pond Creek at Rugby Middle School

ADDENDUM #1

May 21, 2015

Please incorporate the following sheets to the contract documents:

MILL POND CREEK RESTORATION, RUGBY MIDDLE SCHOOL, HENDERSON COUNTY (May 2015) by Confluence Engineering, Andrew David Bick, PE:

- NC E&S PLAN – SHEET 1 OF 3
- NOTES AND SEQUENCE – SHEET 2 OF 3
- DETAILS – SHEET 3 OF 3
SEQUENCE OF CONSTRUCTION EVENTS

THE FOLLOWING SEQUENCE MAY BE ADJUSTED BASED ON SITE CONDITIONS, STREAM FLOW, AVAILABILITY OF PLANT MATERIALS AND OTHER FACTORS.

GENERAL CONSTRUCTION NOTES FOR ALL REACHES

1. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL COMPLY WITH THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL DESIGN MANUAL.
2. CONTRACTOR SHALL INSTALL PUMP-AROUND SYSTEMS TO DIVERT FLOW WHILE WORKING IN LIVE, FLOWING CHANNELS. THE CONTRACTOR SHALL OPERATE AND MAINTAIN THE PUMP-AROUND SYSTEMS 24 HOURS A DAY UNLESS ALL DISTURBED AREAS WITHIN THE PUMP-AROUND AREA CAN BE STABILIZED BY THE END OF THE WORK DAY. THE CONTRACTOR SHALL NOT REMOVE PUMP-AROUND SYSTEMS AND ADVANCE TO THE NEXT WORK AREA UNTIL THE CURRENT WORK AREA IS COMPLETED AND STABILIZED.
3. NO MATERIAL FROM THE OFF-LINE CHANNEL EXCAVATION MAY BE BACKFILLED INTO ADJACENT, ABANDONED CHANNEL SEGMENTS UNTIL THE NEWLY CONSTRUCTED CHANNEL SECTION IS COMPLETED AND STABILIZED, AND THE STREAM FLOW HAS BEEN DIVERTED INTO THE NEWLY CONSTRUCTED CHANNEL SECTION, EVEN IF WATER IN THAT SECTION OF ABANDONED CHANNEL IS BEING DIVERTED.
4. IN AREAS WITHOUT A PUMP-AROUND SYSTEM, THE CONTRACTOR SHALL DISTURB ONLY AS MUCH CHANNEL AS CAN BE STABILIZED WITH SEEDING, MULCH AND EROSION CONTROL MATTING BY THE END OF EACH WORK DAY.
5. CLEARING AND GRUBBING ACTIVITIES SHALL NOT EXTEND MORE THAN 150 LINEAR FEET AHEAD OF IN-STREAM WORK.
6. WHEN CROSSING AN ACTIVE SECTION OF CHANNEL, A TEMPORARY STREAM CROSSING SHALL BE INSTALLED ACCORDING TO THE PLANS AND SPECIFICATIONS.
7. ALL GRADED AREAS WITH SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED WITHIN SEVEN DAYS OF REACHING FINAL GRADES. ALL OTHER AREAS SHALL BE STABILIZED WITHIN 14 DAYS.
8. LOCATIONS FOR STAGING AND STOCKPILE AREAS AND STREAM CROSSINGS SHALL BE SELECTED BY THE CONTRACTOR SO AS TO MINIMIZE THE POTENTIAL FOR SOIL TO BE RELEASED TO THE STREAM.

PHASE 1: MOBILIZATION AND GENERAL SITE PREPARATION

1. MOBILIZE EQUIPMENT AND MATERIALS TO THE SITE. LOCATE LIMITS OF DISTURBANCE.
2. ESTABLISH CONSTRUCTION ENTRANCES/EXITS AND STAGING AREAS. INSTALL TEMPORARY STREAM CROSSINGS AS NEEDED TO ACCESS WORK AREAS.
3. ESTABLISH CONSTRUCTION HAUL ROUTES AND MINIMIZE DISTURBANCE BEYOND IMMEDIATE HAUL ROUTES AND GRADING LIMITS. STABILIZE HAUL ROUTE SURFACES WITH STONE AND FILTER FABRIC AS NECESSARY.
4. ALL HAUL ROADS SHALL BE MONITORED FOR SEDIMENT LOSS ON A DAILY BASIS. IN THE EVENT OF SEDIMENT LOSS, SILT FENCE OR OTHER APPROPRIATE SEDIMENT AND EROSION CONTROL PRACTICES SHALL BE INSTALLED. STABILIZED SILT FENCE OUTLETS SHALL BE LOCATED AT POINTS OF LOW ELEVATION OR A MINIMUM SPACING OF 150 LINEAR FEET.
5. ANY STOCKPILED MATERIALS NOT USED FOR BACKFILL WITHIN 7 DAYS OF EXCAVATION SHALL BE STABILIZED WITH TEMPORARY SEED AND STRAW MULCH.

PHASE 2: CHANNEL CONSTRUCTION

1. BASE FLOW SHALL BE DIVERTED PER THE PLANS. INSTALL TEMPORARY COffer Dams upstream AND downstream of work area. INSTALL PUMP, SUCTION AND DISCHARGE LINES, AND DIVERT FLOW AROUND TIE-IN AREA. INSTALL DEWATERING PUMP IN WORK AREA AS NECESSARY AND DISCHARGE THROUGH SILT BAG.
2. PERFORM EARTHWORK, IN-STREAM STRUCTURE INSTALLATION, CHANNEL PLUGS, SEEDING, MULCHING AND MATTING PER THE PLANS.
3. BACKFILL ABANDONED CHANNEL SEGMENTS AND PERMANENTLY DISPOSE OF EXCESS EXCAVATED MATERIAL IN APPROVED UPLAND OR OFF-SITE AREA. SILT FENCE SHALL BE INSTALLED ON THE CREEK SIDE OF ALL TEMPORARY STOCKPILES.
4. TEMPORARILY Dismantle FLOW DIVERSION PRIOR TO FLOOD EVENT THAT EXCEEDS CAPACITY OF DIVERSION, ENSURING THAT WORK AREAS ARE FULLY STABILIZED.
5. ONCE RESTORED CHANNEL IS FULLY STABILIZED, Dismantle Pumps, Discharge Lines and Coffer Dams and Return Flow to Restored Channel.

PHASE 3: DEMOBILIZATION AND PLANTING

1. UPON COMPLETION OF STREAM AND FLOODPLAIN GRADING OPERATIONS, STOCKPILED MATERIALS, CONSTRUCTION ENTRANCES/EXITS AND TEMPORARY STREAM CROSSINGS SHALL BE REMOVED, AND THE CONSTRUCTION HAUL ROUTES SHALL BE GRADED, SEEDED AND MULCHED AS NEEDED TO RESTORE THEM TO THEIR PRE-PROJECT CONDITIONS. SILT FENCES SHALL BE REMOVED ONLY AFTER PERMANENT GROUND COVER HAS BEEN ESTABLISHED ON DISTURBED AREAS.
2. THE CONTRACTOR SHALL ENSURE THAT THE SITE IS FREE FROM TRASH AND CONSTRUCTION MATERIALS PRIOR TO DEMOBILIZATION OF EQUIPMENT FROM THE SITE.
3. THE STAGING AREAS SHALL BE RESTORED TO THEIR PRE-PROJECT CONDITIONS.
4. LIVE STANDING AND BUFFER AND WETLAND TREE AND SHRUB PLANTING SHALL BE COMPLETED AFTER GRADING OPERATIONS ARE COMPLETE AND DURING THE DORMANT SEASON (NOVEMBER TO APRIL).
CONSTRUCTION ENTRANCE/EXIT

1. STEEL T-POST WITH WIRE BACKING
2. COMPACTED BACKFILL RUNOFF
3. TIMBER OR STEEL BRIDGE MATS SHALL FULLY SPAN CHANNEL WITH NO GAPS BETWEEN MATS

SECTION

SILT FENCE

1. SILT FENCE SHALL BE PLACED ON STREAM SIDE OF ALL STOCKPILES.
2. SILT FENCE SHALL BE REMOVED UPON COMPLETION OF EARTHWORK.

PROFILE

TEMPORARY STREAM CROSSING - MAT

SILT BAG

9" MIN. CLASS B STONE PAD

10' MIN. FROM STREAM

DEWATERING PUMP AS NEEDED

SILT BAG ON STONE PAD, SEE DETAIL ABOVE

COFFER DAM: CLASS B STONE W/ PLASTIC SHEETING

1' DEEP SETTLING POOL

WORK AREA

TOE OF BANK (TYP)

TOP OF BANK (TYP)

VARES

CLASS B RIPRAP SPLASH PAD

DIVERSION PUMP MIN. 500 GPM CAPACITY

NOTE: WORK AREA SHALL BE STABILIZED BY THE END OF EACH WORK DAY.

PUMP-AROUND SCHEMATIC

FLOW

MAX DEPTH -1'

TOP OF BANK

STREAM BOTTOM

BANK TO BANK

PE SHEETING WITH 6" OF #57 STONE OVERLAY; USE SAND BAGS AT BASE AS NECESSARY

DATE: MAY 2015
SCALE: NTS
Sheet 3 of 3
MILL POND CREEK RESTORATION PROJECT RUGBY MIDDLE SCHOOL HENDERSON COUNTY, NC